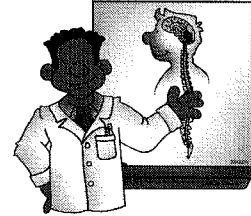
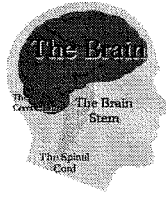


Unit 3A

The Nervous System & Endocrine System



A) The Nervous System (p.59)

The nervous system is the body's speedy, electrochemical communication network, consisting of all the nerve cells of the CNS and the PNS.

Our brain and spinal cord form the **CENTRAL NERVOUS SYSTEM (CNS)** which communicates with the body's sensory receptors, muscles, and glands via the **PERIPHERAL NERVOUS SYSTEM (PNS)**.

Neurons are the nervous system's building blocks. PNS information travels through axons that are bundled together into the electrical cables we know as 'nerves'. The optic nerve for example, bundles a million axon fibers into a single cable carrying the messages each eye sends to the brain.

THE PERIPHERAL NERVOUS SYSTEM (p.59)

This has TWO main components: the Somatic and Autonomic systems.

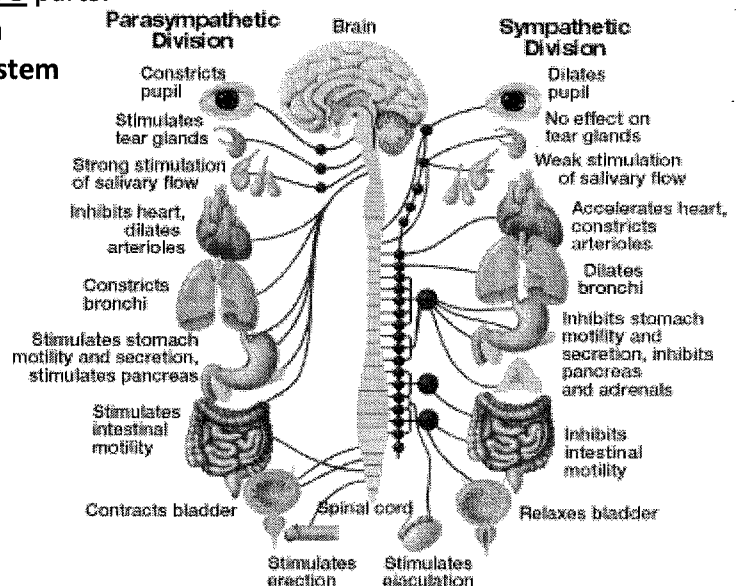
1) **Somatic System**- enables voluntary control of our skeletal muscles (also called skeletal nervous system in some texts)

2) **Autonomic System**- controls glands and the muscles of our internal organs, influencing such functions as glandular activity, heartbeat, and digestion. Like an automatic pilot, this system may be consciously overridden but usually operates on it's own. The Autonomic System is also broken down into **TWO** parts:

- 1) Sympathetic Nervous System
- 2) Parasympathetic Nervous System

How do reflexes work? (p.60-61)

Please answer here:



B) The Endocrine System (p.62-63)

The Endocrine System is the body's "slow" chemical communication system. It is a set of glands that secrete hormones into the bloodstream.

- **Hormones:** chemical messengers that are manufactured (made) by the endocrine glands, travel through the bloodstream and affect other tissues.

Two Main Glands you need to know:

1) Adrenal Gland -

2) Pituitary Gland -

What do these two glands produce? Answer this in the space above (p.62-63)

Question:

Why is the pituitary gland called the *MASTER GLAND*? Explain.

